8329 CrownShield® Ultimate Topcoat

Technical Data Sheet (TDS)

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8329 CrownShield® Ultimate Epoxy Top Coat is a two-component, ultra-low viscosity, high solids, top coat designed to enhance the performance of decorative and industrial flooring. It is formulated to provide superior abrasion, chemical, and ultra-violet light resistance. It can be applied directly over Crown Polymers epoxies.

PHYSICAL PROPERTIES

SOLIDS CONTENT	•••••	>90%
VOC CONTENT		<100 g/L
VOLUMETRIC MIX RATIO	•••••	2A:1B
COVERAGE RATE		250-400 ft²/gal 4-6 Mils
APPLICATION TEMP		50°- 90°F
POTLIFE 1 Gal mass @ 75°F		45 Mins
FOOT TRAFFIC @ 75°F		12-16 Hours
RECOAT WINDOW		6-24 Hours
FULL CURE		3-5 Days
PACKAGING		3 Gal Kit 15 Gal Kit

TYPICAL USES

Aircraft Hangar and Maintenance Floors

PRODUCT DESCRIPTION

- Automotive Show Room and Repair Floors
- Commercial Bakery and Kitchen Floors
- Decorative Polymer Floors
- Hospital and Health Care Facility Floors
- Industrial Polymer Floors
- Laboratory and Research Floors
- Manufacturing and Warehouse Floors
- Metallic Polymer Floors
- Pharmaceutical Floors
- School and University Floors

BENEFITS

- Superior intercoat adhesion
- Excellent gloss retention
- Strong chemical & abrasion resistance

MECHANICAL PROPERTIES

TENSILE STRENGTH ASTM D2370	 4,000 p.s.i
TENSILE ELONGATION ASTM D2370	 30%
GLOSS INDEX 60° ASTM D523	 90-95
ADHESION TO CONCRETE ASTM D7234	 400 p.s.i
SHORE D HARDNESS ASTM D2240	 70-75

COLORS



LIMITATIONS

- Higher temperatures will result in shortened working times and faster drying time.
- Apply product at recommended coverage rates
- May amber with constant UV Exposure
- Do not thin

CHEMICAL RESISTANCE

Refer to CrownTech Chemical Resistance Guideline Technical Bulletin No. 9

SHELF LIFE

1 Year from Date of Manufacture provided unopened

STORAGE

Store in a dry environment at room temperature and out of direct sunlight.

APPLICATION EQUIPMENT

Personal Protective Equipment Jiffy Mixing Paddle Drill 18"x 1/4" Nap Mohair Roller Cover 5-7 Mil Notched Squeegee 4" Chip Brush Spike Shoes

SURFACE DIAGNOSTICS

Concrete must be structurally sound and free of all contaminants and bond breakers. Test concrete compressive strength using a Schmidt or Rebound Hammer to ensure substrate has compressive strength of 3500 psi or higher.

Perform a pH test using concrete pH test strips or meter to ensure substrate pH is between 9-12.

Perform Moisture Test using either Calcium Chloride per ASTM F1869 or In-Situ Relative Humidity Probe per ASTM F2170 to ensure substrate has Moisture Vapor Emission Rate of 3 lbs or less and Relative Humidity of 80% or less. See CrownTech Bulletin 6: Moisture Mitigation Negative Side Moisture Barrier

If Moisture Vapor Emission Rate is above 3 lbs but below 25 lbs and relative humidity is above 80% but below 99% then apply 8303 Moisture Barrier Primer first at 16 mils with a coverage rate of 100 Ft²/ Gal.

SURFACE PREPARATION

Use Mohs scratch test to determine concrete hardness for proper diamond bond selection.

Concrete should be mechanically profiled and prepared to produce a Concrete Surface Profile (CSP) level between #2 & #4 per ICRI Guideline no. 310.2R. See CrownTech Bulletin 1: Concrete Surface Preparation.

All perimeter areas of coating termination shall be masked for protection. Saw cut and key-in all termination points.

SURFACE REPAIR

All depressions, divots and cracks should be profiled and free of dust and contaminants. Repair surface imperfections to reduce the ability to see the defect through the coating.

Honor all dynamic (moving) joints, static joints may be filled, use dynamic joints as initiation and termination points during application process where needed.

TEMPERATURE EVALUATION

Ambient and substrate temps should be above 50°F and a minimum of 5°F above Dew Point.

Product temps should be between 70-80°F.

Relative Humidity should not exceed 80%. See CrownTech Bulletin 7: Temperature & Relative Humidity

REFER TO SAFETY DATA SHEETS (SDS)
FOR SAFETY PRECAUTIONS.

SAFETY PRECAUTIONS MUST BE FOLLOWED DURING STORAGE, HANDLING AND USE.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

SHALL BE WORN AT ALL TIMES INCLUDING BUT NOT LIMITED TO LONG SLEEVE SHIRTS OR DISPOSIBLE ARM SLEEVES, SAFETY GLASSES, DISPOSIBLE NITRILE GLOVES, AND PROPERLY FITTED NIOSH RESPIRATORS ALL SOURCES OF IGNITION SHOULD
BE TURNED OFF AND ENVIRONMENT
SHOULD HAVE PROPER AND ADEQUATE
VENTILATION DURING APPLICATION AND
CURING PROCESS

MIXING AREA SHOULD BE PLACED ON OR IN CLOSE PROXIMITY TO PROJECT. AREA SHOULD BE SECURELY COVERED WITH PLASTIC, CARDBOARD OR TARP. STAGE MATERIALS, TOOLS AND CLEANING SUPPLIES IN MIXING AREA PRIOR TO APPLICATION PROCESS.

DO NOT MIX MORE MATERIAL THAN CAN BE APPLIED IN 20 MINUTES

MIXING PROCEDURE



Pre-Mix A-Component in its respective container using clean Jiffy mixer and drill at slow speeds for 30 seconds or until thoroughly homogeneous.

Transfer A-component and B-component at a mix rate of 2A:1B by volume into a clean 5-gal bucket and mix for 2-3 minutes at low RPMs being sure to scrape sides of the bucket with a stir stick ensuring both components are thoroughly blended

COVERAGE RATE

250-400 Ft2 / Gal @ 4-6 mils

COVERAGE RATE MAY VARY DEPENDING ON SUBSTRATE CONDITIONS

WORKING TIME

20-30 Minutes @ 75°F (Standard)

WARMER AMBIENT, PRODUCT AND SURFACE TEMPERATURES WILL SHORTEN POTLIFE AND WORKING TIME.

APPLICATION PROCEDURE

Cut-in edges using a 4" chip brush. Do not allow wet edges to stand more than 10 minutes ahead of application of main body of floor.

EPOXY SETS FASTER IN MASS, MIXED MATERIAL SHOULD NOT REMAIN IN BUCKET

- Pour a band of mixed material across the surface roughly 6-8" wide. Use 5-7 mil notched squeegee to gauge material across surface
 - · Maintain wet edge
 - · Always pour next mixed batch onto wet edge
 - Do not apply heavier than recommended coverage rates
- Back roll the surface with 18" x 1/4" nap roller by walking into the wet material wearing spike shoes and roll the surface wall to wall with overlap perpendicular to your first pass
 - Do not overwork material



Allow coating to dry 12-16 Hrs @ 75°F Do not force dry. Recoat: 6-24 Hrs

SLIP RESISTANCE

Skid-Resistance – Field (in situ) Wet Dynamic Coefficient of Friction (DCOF), ANSI A326.3. See Crown Polymers Technical Bulletin: 4 Coefficient of Friction.

CLEAN-UP

Clean-up mixing station, tools, and equipment as required. Use acetone, a VOC exempt solvent, for cleaning up. Observe all legal, and health, and safety precautions when handling or storing solvents and materials, particularly in confined spaces. Make sure the working areas are well ventilated at all times during placement and curing time.

DISPOSAL

Dispose of empty packaging and other waste in accordance with federal, state, provinces and local regulations.

MAINTENANCE

Inspect the installed floor by spot cleaning and spot repairing the damaged or cracked areas. To prolong life of the flooring system, a daily maintenance program is highly recommended to ensure the floor is safe for its intended purposes. See Crown Polymers Technical Bulletin: 8 Care and Maintenance.

TECHNICAL SUPPORT

For questions, contact a Crown Polymers Representative. Additional Support Documents are available from Crown Polymers, including brochures, application guidelines, videos and more. Visit Crownpolymers.com or contact Crown for additional resources

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